



DEPARTMENT OF TRANSPORTATION
MATERIALS TRANSPORTATION BUREAU
WASHINGTON, D.C. 20590

46419

Materials Transportation Bureau

49 CFR Parts 172, 173, 178

[Docket No. HM-139C; Amdt. Nos. 172-59, 173-139, 178-61]

Conversion of Individual Exemptions to Regulations of General Applicability

AGENCY: Materials Transportation Bureau (MTB), Research and Special Programs Administration, DOT.

ACTION: Final rule.

SUMMARY: This action is being taken to incorporate into the Department's Hazardous Materials Regulations a number of changes based on the data and analyses supplied in selected exemption applications or from existing exemptions. The need for this action has been created by the public demand to make available new packaging and shipping alternatives that have proven themselves safe under the Department's exemptions program. The intended effect of these amendments is to provide wider access to the benefits of transportation innovations recognized and shown to be effective and safe.

EFFECTIVE DATE: July 10, 1980.

FOR FURTHER INFORMATION CONTACT: John C. Allen, Office of Hazardous Materials Regulations, 400 7th Street, S.W., Washington, D.C. 20590 (202-472-2726).

SUPPLEMENTARY INFORMATION: On March 24, 1980 the Bureau published Notice No. 80-5 (45 FR 18994) under Docket HM-139C which proposed to amend the Hazardous Materials Regulations by incorporating the provisions of certain DOT exemptions and applications for exemptions into the general regulations. The public comment period ended on April 23, 1980. All comments received on Docket HM-139C have been reviewed. With one important exception relating to analytical standards, all commenters were favorable to the proposals.

MTB proposed to add § 173.4 to the regulations which would have had the effect of substantially deregulating minute quantities of hazardous materials when shipped as an analytical standard. This proposal was based on three DOT exemptions (7755, 7921, 8116) which authorized a variety of different packaging techniques for small quantities of

specified hazardous materials. An attempt was made to create a standardized package which could be referenced in § 173.4 that would adequately accommodate various methods of shipping these very small quantity analytical standards. Based on the comments received on this proposal, the Bureau was not successful in this attempt. Commenters' recommendations included changing the outer packaging requirement; deleting the requirement for neutralizing material for corrosive liquids; authorizing a greater quantity of material per package; and deregulating minute quantities of hazardous materials other than those used for analytical standards. One commenter strongly suggested that the proposal be tightened substantially to limit the types of hazardous materials that would qualify for the exception, especially for shipment by air. Although MTB does not believe these problems are insurmountable, it is believed that enough disagreement and confusion exist that the entire issue of providing a general exception for analytical standards should be addressed separately. Consequently, the proposed amendment to add § 173.4 to the Hazardous Materials Regulations is being withdrawn from this docket and will be considered for a future rulemaking after further study.

All other proposals contained in Notice 80-5 are being adopted by these amendments. Three minor changes should be noted, however. First, the notice proposed to consolidate § 173.119 (m)(13) and (m)(15) into one paragraph to be designated (m)(13). This necessitates an amendment to paragraph (m)(14) by deleting the reference to the DOT 105A tank car since this tank car will be authorized under the provisions of the new paragraph (m)(13). Also, the reference to (Note 1) in existing § 173.119(m)(15) is deleted as no longer applicable.

The second minor change involves the amendment to the table which authorizes certain types of steels to be used in constructing the DOT 3AA and 3AAX cylinders in § 178.37-5. Part of the proposed amendment to this table was to eliminate the unused steel designations NE-8630, 9115, 9125, 9115X, and 9125X. One commenter requested that the NE-8630, 9115 and 9125 steels not be deleted since the company was

considering a new cylinder design involving these steels. Consequently, only the 9115X and 9125X steel designations are being deleted.

The last change from the notice involves a relocation of a proposed amendment to § 173.114a. The proposal involves the allowance of the use of a single Blasting Agent placard in cases where both an Oxidizer placard and Blasting Agent placard would be required. Notice 80-5 proposed to include this authorization by adding a new paragraph (j)(1) to § 173.114a. Since this involves a placarding requirement, a more appropriate location would be in § 172.504 *General Placarding Requirements*. Consequently, this amendment has been effected by adding a new footnote Note 10 to Table 2 in § 172.504.

In consideration of the foregoing, 49 CFR Parts 172, 173 and 178 are amended as follows:

PART 172--HAZARDOUS MATERIALS TABLE AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

§ 172.101 [Amended]

1. In § 172.101 the *Hazardous Materials Table* is amended by revising the entries on Consumer Commodity; Sodium potassium alloy (liquid); and Tear gas device, to read as follows:

BILLING CODE 4910-80-M

(1) +/ E/ N/ W	(2)	(3)	(4)	(5)	(6)			(7)			
					Maximum net quantity in one package			Water shipments			
					Label(s) required (if not exempted)	Packaging (a)	(b)	(a)	(b)	(c)	
	Hazardous materials descriptions and proper shipping names.	Hazard class	ID number	Label(s) required (if not exempted)	Packaging (a)	(b)	(a) <td>(b) <td>(c)</td> <td></td> </td>	(b) <td>(c)</td> <td></td>	(c)		
	Consumer Commodity	ORM-D		None	123,50X(b)	123,510 123,1200	65 pounds gross	65 pounds gross		Not subject to requirements in Part 176.	
*	Sodium potassium alloy (liquid)	Flammable solid	UN1422	* Flammable solid and Dangerous when wet		123,206	Forbidden	1 pound	1,2	5	* Under deck stowage must be readily accessible. Segregation same as for flammable solid labeled Dangerous when wet.
*	Tear gas device	Irritating material	NA1693	* Irritant	None	123,385	Forbidden	75 pounds	1	5	* Stow away from living quarters
4											
4											
4											
4											

BILLING CODE 4910-40-C

2. In § 172.504 Table 2 is revised to read as follows:

§ 172.504 General placarding requirements.
(a) * * *

Table 2

If the motor vehicle, rail car or freight container contains a material classed (described) as—	The motor vehicle, rail car, or freight container must be placarded on each side and each end—
Class C explosives.....	DANGEROUS. ¹ *
Blasting agents.....	BLASTING AGENTS. ¹ *
Nonflammable gas.....	NONFLAMMABLE GAS. ¹ *
Nonflammable gas (Chlorine).....	CHLORINE. ¹ *
Nonflammable gas (Fluorine).....	POISON. ¹ *
Nonflammable gas (Oxygen, pressurized liquid).....	OXYGEN. ¹ *
Flammable gas.....	FLAMMABLE GAS. ¹ *
Combustible liquid.....	COMBUSTIBLE LIQUID. ¹ *
Flammable liquid.....	FLAMMABLE.....
Flammable solid.....	FLAMMABLE SOLID. ¹ *
Oxidizer.....	OXIDIZER. ¹ *
Organic peroxide.....	ORGANIC PEROXIDE.....
Poison B.....	POISON.....
Corrosive material.....	CORROSIVE. ¹ *
Irritating material.....	DANGEROUS.....

¹ Except for shipments by water, OXIDIZER placards need not be displayed if a freight container, motor vehicle or rail car also contains blasting agents and is placarded BLASTING AGENT as required.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

3. In § 173.119 paragraphs (a)(27), (b)(8), (m)(13) and (m)(14) are revised, paragraph (m)(15) is deleted, and paragraph (a)(29) is added to read as follows:

§ 173.119 Flammable liquids not specifically provided for.

(a) * * *
(27) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity, or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Authorized only for material which will not react with or cause decomposition of polyethylene. Not authorized for transportation by air.

(29) Marine portable tanks meeting the requirements of 46 CFR Part 64 authorized for highway and cargo vessel only when shipped in support of offshore oil well drilling activities. Tanks shall comply with mounting and tie-down requirements of § 178.245-4 of this subchapter when transported by highway.

(b)(8) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this

subchapter) polyethylene container of not over 6-gallon capacity, or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Authorized only for material which will not react with or cause decomposition of polyethylene. Not authorized for transportation by air.

(13) Specification 103AW, 103ALW, 103A-ALW, 103ANW, 103BW, 103CW, 103DW, 103EW, 103W, 104W, 105A100W, 111A60ALW1, 111A60ALW2, 111A60W1, 111A60W2, 111A60W5, 111A100F2, 111A100W3, 111A100W6, 115A60W6, or AAR206W (§§ 179.200, 179.201, 179.220 of this subchapter). Tank cars. All special requirements for tank cars according to flash point, vapor pressure, and viscosity, in paragraphs (a) through (l) of this section apply. Not authorized for flammable liquids which are also organic peroxides.

(14) Specification 112A200W or 114A340W (§§ 179.100, 179.101 of this subchapter). Tank cars. Authorized only for propylene oxide except 112A200W also authorized for acrylonitrile.

(15) [Deleted]

4. In § 173.125 paragraph (a)(7) is revised to read as follows:

§ 173.125 Alcohol, n.o.s. (flammable liquid).

(a) * * *
(7) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this subchapter), polyethylene container of

not over 5-gallon capacity, or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures. Not authorized for transportation by air.

5. In § 173.221 paragraph (a)(9) is revised to read as follows:

§ 173.221 Liquid organic peroxides, n.o.s. and liquid organic peroxide solutions, n.o.s.

(a) * * *
(9) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 6-gallon capacity, or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures. Not authorized for transportation by air.

6. In § 173.222 paragraph (a)(4) is revised to read as follows:

§ 173.222 Acetyl peroxide and acetyl benzoyl peroxide, solution.

(a) * * *
(4) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity, or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures. Not authorized for transportation by air.

In § 173.245 paragraph (a)(21) is revised and paragraph (a)(35) is added to read as follows:

§ 173.245 Corrosive liquid not specifically provided for.

(a) * * *
(21) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity, or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for

assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures. Not authorized for transportation by air.

(35) Marine portable tanks meeting the requirements of 46 CFR Part 64 authorized for highway and cargo vessel only when shipped in support of off-shore oil well drilling activities. Tank must be compatible with lading. Not authorized for corrosive materials which also meet the definition of another hazard class. Tanks shall comply with mounting and tie-down requirements of § 178.245-4 of this subchapter when transported by highway.

8. In § 173.283 paragraph (a)(23) is revised and paragraph (a)(30) is added to read as follows:

§ 173.263 Hydrochloric (muriatic acid); hydrochloric (muriatic) acid mixtures; hydrochloric (muriatic) acid solution, inhibited; sodium chlorite solution (not exceeding 42 percent sodium chlorite); and cleaning compounds, liquids, containing hydrochloric (muriatic) acid.

(a) * * *

(23) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity, each or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failure. Not authorized for transportation by air.

(30) Marine portable tanks meeting the requirements of 46 CFR Part 64 authorized for highway and cargo vessel only when shipped in support of off-shore oil well drilling activities. Tanks shall comply with mounting and tie-down requirements of § 178.245-4 of this subchapter. Authorized only for mixtures of hydrochloric and hydrofluoric acid containing 2% or less of hydrofluoric acid.

9. In § 173.264 paragraph (a)(20) is added to read as follows:

§ 173.264 Hydrofluoric acid; white acid.

(a) * * *

(20) Marine portable tanks meeting the requirements of 46 CFR Part 64 authorized for highway and cargo vessel only when shipped in support of off-

shore oil well drilling activities. Tanks shall comply with mounting and tie-down requirements of § 178.245-4 of this subchapter when transported by highway. Authorized for hydrofluoric acid mixtures only.

10. In § 173.272 paragraph (c), (d), (e), (f), (g) and (i)(11) are revised and paragraph (i)(29) is added to read as follows:

§ 173.272 Sulfuric acid.

(c) *Sulfuric acid concentration of 51 percent or less:* Authorized packaging is described in paragraphs (1) through (16), (23) through (26) and paragraph (29) of paragraph (i) of this section.

(d) *Sulfuric acid concentration of greater than 51 percent to not over 65.25 percent:* Authorized packaging is described in paragraphs (1) through (16) and (27) through (29) of paragraph (i) of this section.

(e) *Sulfuric acid concentration of greater than 65.25 percent to not over 77.5 percent:* Authorized packaging is described in paragraphs (1) through (16), (20) through (22) and paragraph (29) of paragraph (i) of this section.

(f) *Sulfuric acid concentration of greater than 77.5 percent to not over 95 percent:* Authorized packaging is described in paragraphs (1) through (22) and paragraph (29) of paragraph (i) of this section.

(g) *Sulfuric acid concentration of greater than 95 percent to not over 100.5 percent:* Authorized packaging is described in paragraphs (1) through (4), (6), (14) through (20), and (29) of paragraph (i) of this section.

(i) * * *

(11) Specification 12P (§ 178.211 of this subchapter). Fiber board box with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity, or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures. Not authorized for transportation by air.

(29) Marine portable tanks meeting the requirements of 46 CFR Part 64 authorized for highway and cargo vessel only when shipped in support of off-shore oil well drilling activities. Tanks shall comply with mounting and tie-down requirements of § 178.245-4 of this subchapter when transported by

highway. Authorized for sulfuric acid concentrations up to 65.25 percent. Concentrations up to 100.5 percent are also authorized if the corrosive effect on steel is not greater than that of 65.25 percent sulfuric acid measured at 100° F.

11. In § 173.277 paragraph (a)(5) is revised to read as follows:

§ 173.277 Hypochlorite solutions.

(a) * * *

(5) Specification 12P (§ 178.211 of this subchapter). Fiberboard box with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures. Not authorized for transportation by air.

12. In § 173.346 paragraph (a)(24) is revised to read as follows:

§ 173.346 Polson B liquids not specifically provided for.

(a) * * *

(24) Specification 12P (§ 178.211 of this subchapter). Fiberboard boxes with one inside specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity or two inside specification 2U polyethylene containers of not over 2½ gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures. Not authorized for transportation by air.

13. In § 173.353 paragraph (a)(3) is revised to read as follows:

§ 173.353 Methyl bromide and methyl bromide mixtures.

(a) * * *

(3) Specification 3A225, 3AA225, 3B225, 3E1800, 4A225, 4B225, 4BA225, or 4BW225, (§§ 178.36, 178.37, 178.38, 178.42, 178.49, 178.50, 178.51, 178.61 of this subchapter). Metal cylinders. Valves and other closing devices must be protected to prevent damage in transit by equipping the cylinder with valve protection required by § 173.301(g) of this subchapter. Cylinders having a wall thickness of less than 0.08 inch must be packed in boxes or crates (§ 173.25).

14. In § 173.357 paragraph (b)(1) is revised to read as follows:

§ 173.357 Chloropicrin and chloropicrin mixtures containing no compressed gas or ison A liquid.

(b) * * *

(1) Specification 3A, 3AA, 3B, 3C, 3D, 3E, 4A, 4B, 4BA, 4BW, or 4C (§§ 178.36, 178.37, 178.38, 178.40, 178.41, 178.42, 178.49, 178.50, 178.51, 178.52, 178.61 of this subchapter). Metal cylinders. Valves and other closing devices must be protected to prevent damage in transit by equipping the cylinders with valve protection required by § 173.301(g) of this subchapter. A cylinder closed by means of a solid plug may have the closure protected by a metal collar. Cylinders having a wall thickness of less than 0.08 inch must be packaged in boxes or crates. Each cylinder having a water capacity over 275 pounds must have a minimum design pressure of 225 p.s.i.g., unless the specification requires a higher minimum design pressure.

15. In § 173.385 paragraph (a)(3) is added to read as follows:

§ 173.385 Tear gas grenades, tear gas candles, or similar devices.

(a) * * *

(3) Specification 12B (§ 178.205 of this subchapter). Fiberboard box with inside tear gas devices meeting specifications of Part 2Q (§§ 178.33, 178.33a of this subchapter). Each inside container must be placed into spiral wound tubes fitted with metal ends or a double-faced fiberboard box with suitable padding. Not more than 30 inside containers shall be placed in one outside box and gross weight shall not exceed 35 pounds.

16. In § 173.505 paragraph (b) is added to read as follows:

§ 173.505 Exceptions for other regulated material (ORM).

(b) Strong outside packagings as specified in § 173.1200 of this subchapter are not required for materials classed as ORM-D when unitized in cages, carts, or similar overpacks and when shipped by private motor carrier from a distribution center to retail outlet.

PART 178—SHIPPING CONTAINER SPECIFICATIONS

17. In § 178.24a, § 178.24a-2 is revised to read as follows:

§ 178.24a Specification 2E; inside polyethylene bottle.

§ 178.24a-2 Rated capacity.

(a) Maximum capacity not to exceed 5 quarts.

18. In § 178.37, the first table in § 178.37-5(a) is revised and paragraph 178.37-5(b) is added to read as follows:

§ 178.37 Specification 3AA; seamless steel cylinders made of definitely prescribed steels or 3AAX; seamless steel

cylinders made of definitely prescribed steels of capacity over 1,000 pounds water volume.

§ 178.37-5 Authorized steel.

(a) Open-hearth, basic oxygen, or electric steel of uniform quality. The following chemical analyses are authorized (See Note 1):

Designation	4130X (percent) (see note 2)	NE-8630 (percent) (see note 2)	9115 (percent) (see note 2)	9125 (percent) (see note 2)	Carbon-boron steel (percent) (see par. b)	Intermediate manganese (percent)
Carbon	0.25/0.35	0.28/0.33	0.10/0.20	0.20/0.30	0.27-0.37	0.40 max.
Manganese	0.40/0.90	0.70/0.90	0.50/0.75	0.50/0.75	0.80-1.40	1.35/1.65
Phosphorus	0.04 max.	0.04 max.	0.04 max.	0.04 max.	0.035 max.	0.04 max.
Sulfur	0.05 max.	0.04 max.	0.04 max.	0.04 max.	0.045 max.	0.05 max.
Silicon	0.15/0.35	0.20/0.35	0.60/0.90	0.60/0.90	0.3 max.	0.10/0.30
Chromium	0.80/1.10	0.40/0.60	0.50/0.65	0.50/0.65		
Molybdenum	0.15/0.25	0.15/0.25				
Zirconium			0.05/0.15	0.05/0.15		
Nickel		0.40/0.70				
Boron					0.005-0.003	

NOTE 1.—A heat of steel made under the above specifications, check chemical analysis of which is slightly out of the specified range, is acceptable, if satisfactory in all other respects, provided the tolerances shown in the following tables are not exceeded, except as approved by the Department:

(b) When a carbon-boron steel is used, a hardenability test must be performed on the first and last ingot of each heat of steel. The results of this test must be recorded on the Record of Chemical Analysis of Material for Cylinders required by § 178.37-22 of this section. This hardness test must be made $\frac{1}{16}$ -inch from the quenched end of the Jominy quench bar and the hardness shall be at least Rc 33 and no more than Rc 53.

19. In § 178.211 the title is revised to read as follows:

§ 178.211 Specification 12P; fiberboard boxes. Nonreusable containers for inside plastic containers greater than 1-gallon capacity, as prescribed in Part 173 of this subchapter.

20. In § 178.343, paragraph (a) of § 178.343-3 is revised to read as follows:

§ 178.343 Specification MC-312; cargo tanks.

§ 178.343-3 Closure for manholes.

(a) Each compartment shall be accessible through a manhole conforming to paragraph UG-46(g)(1) of the ASME Code. The manhole cover shall be designed to provide a secure closure of the manhole. All joints between manhole covers and their seats shall be tight against leakage of vapor and liquid. Gaskets, if used, shall be of suitable material not subject to attack by lading.

(49 U.S.C. 1303, 1804, 1806; 49 CFR 1.53, App. A to Part 1, and paragraph (a)(4) App. A to Part 106)

Note.—The Materials Transportation Bureau has determined that this proposed regulation will not have major economic impact under the terms of Executive Order 12044 and DOT implementing procedures (44 FR 11034), nor an environmental impact under the National Environmental Policy Act (49 U.S.C. 4321 et seq.). A regulatory evaluation and environmental assessment are available for review in the docket.

Issued in Washington, D.C. on June 27, 1980.

L. D. Santman,

Director, Materials Transportation Bureau.

[FR Doc. 80-20310 Filed 7-9-80; 8:45 am]

BILLING CODE 4910-60-M